# Active Recombinant Human IL1B Protein, Pre-aliquoted

**Cat. No.** IL1B-05H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Human IL1B Protein, Ala117 - Ser269, was expressed in E. coli. |
| **Species** | Human |
| **Source** | E.coli |
| **ProteinLength** | Ala117-Ser269 |
| **Description** | The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to contribute to inflammatory pain hypersensitivity. Similarly, IL-1B has been implicated in human osteoarthritis pathogenesis. Patients with severe Coronavirus Disease 2019 (COVID-19) present elevated levels of pro-inflammatory cytokines such as IL-1B in bronchial alveolar lavage fluid samples. The lung damage induced by the Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is to a large extent, a result of the inflammatory response promoted by cytokines such as IL-1B. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2. |
| **Bio-activity** | Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The |

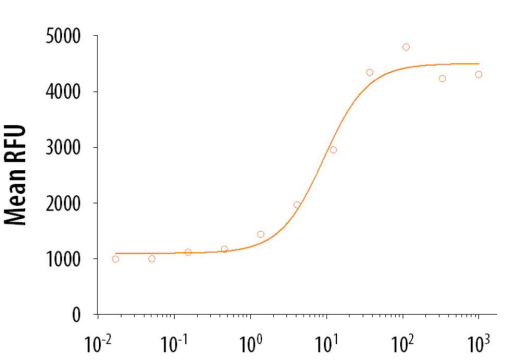
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| | ED50 for this effect is <12 pg/mL. |
| **Molecular Mass** | Predicted Molecular Mass:17 kDa |
| **N-terminal Sequence Analysis** | Ala117 & Pro118 |
| **Endotoxin** | < 0.10 EU/μg of the protein by the LAL method. |
| **Purity** | > 97% by SDS-PAGE under reducing conditions and visualized by silver stain. |
| **Stability** | Use a manual defrost freezer and avoid repeated freeze-thaw cycles.<br>• 6 months from date of receipt at room temperature.<br>• 12 months from date of receipt at 2-8 centigrade as supplied.<br>• 1 month at 2-8 centigrade under sterile conditions after reconstitution.<br>• 3 months at -20 to -80 centigrade under sterile conditions after reconstitution. |
| **Reconstitution** | For a stock solution, reconstitute at 25 μg/mL in sterile PBS, or simply roll Pre-aliquoted directly into cell culture medium for immediate use. |
| **Shipping** | The product is shipped at ambient temperature. |

## GENE INFORMATION

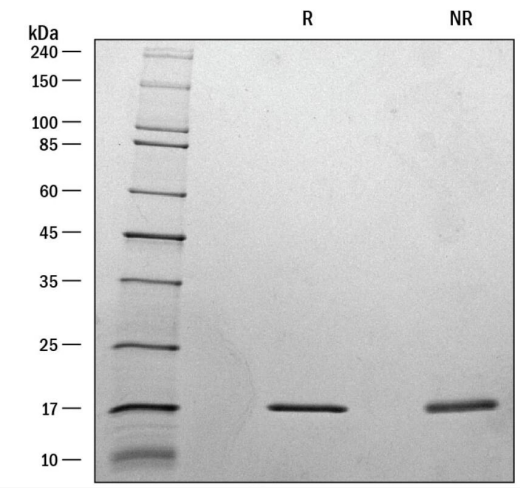
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| **Gene Name** | IL1B interleukin 1 beta [ Homo sapiens (human) ] |
| **Official Symbol** | IL1B |
| **Synonyms** | IL1B; interleukin 1 beta; IL-1; IL1F2; IL1beta; IL1-BETA; interleukin-1 beta; IL-1 beta; catabolin; interleukin 1beta; preinterleukin 1 beta; pro-interleukin-1-beta |

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| **Gene ID** | 3553 |
| **mRNA Refseq** | NM_000576 |
| **Protein Refseq** | NP_000567 |
| **MIM** | 147720 |
| **UniProt ID** | P01584 |
| **Bio-activity** | <br>Recombinant Human IL-1 beta /IL-1F2 stimulates cell proliferation of the D10.G4.1 mouse helper T cell line. The ED50 for this effect is <12 pg/mL. |

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**SDS-PAGE**




1 μg/lane of Recombinant Human IL-1 beta /IL-1F2 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing a single band at 17 kDa.

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